**K-5 Math Lesson Plan**

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| **Teacher: Childress, Gilbert, Wall** | | | **Grade: 5** | | | **Date(s)**: Unit 2 Day 5 |
| **Unit Title: Unit 2: Operations with Whole Numbers and Decimals** | | | | **Corresponding Unit Task: Task 2** | | |
| **Essential Question(s): How do I use multiplication strategies to solve problems with large quantities? How can I use division procedures to help me to solve problems with large quantities? Why is it important to determine the unit rate when purchasing items?** | | | | | | |
| **Materials/Resources** | | | | **Essential Vocabulary** | | |
| **Teacher: sticky notes, Math teacher edition text book** | | **Student: textbook, whiteboard, markers, math journals, pencils, math workbook** | | | **Quotient, dividend, divisor, multiplication, product, rectangular array, equation, area model** | |
| **Learning Experience** | | | | | | |
| **8 Mathematical Practices:**  1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | **Common Core State Standards:**  **5.NBT.6 Number and Operations in Base Ten**  **Find** whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. **Illustrate** and **explain** the calculation by using equations, rectangular arrays, and/or area models. | | | | | |
| **I Can Statement(s):**   |  | | --- | | * I can use the relationship between multiplication and division when finding a quotient. I can determine whole number quotients with up to four-digit dividends and one-digit divisors. | | | | | | |
| **Activating Strategy/Hook:** Play Around the World with the Division Facts. Include facts 0-12. | | | | | |
| **Teacher Directed:** Teacher will review the steps of division using the preferred mnemonic device. (Does/Divide McDonalds/Multiply Serve/Subtract Cheeseburger/Check Rare/ Repeat or Remainder) Model with several problems listing the steps to the side and checking off each step as it is completed. Single digit divided into two and three digit numbers. Be sure to have students copy the device used in their journal. | | | | | |
| **Guided Practice:** Assign students 1-6 page 95 in Envisions textbook. Students will work in pairs and use white boards. One person will call out the steps and check them off as they are completed while the other person is computing the problem. Switch roles for each of the six problems. | | | | | |
| **Independent Practice:** Students will complete problems 9-16 on page 95. | | | | | |
| **Closing/Summarizing Strategy:** Ticket out the door - students will be given a sticky note and will write the steps of division in the correct order. | | | | | |
| **Differentiation Strategies** | | | | | | |
| **Extension** | | | **Intervention** | | | **Language Development** |
| * Students will visit kidsnumbers.com and go to division on home page. Scroll to “Let’s Practice Division” and then click on “Snork’s Long Division Game” Decide what is wrong with the game and then compose an email to the website to explain what needs to be corrected and why. | | | * Review division facts * Divide with single digits only | | | * Repeat the mnemonic orally and make illustrations for each step |
| **Assessment(s):**  Workbook page from Envisions that correlates with lesson 4-5; Ticket out the door | | | | | | |
| **Teacher Reflection:** (Next steps?)  Ready for two digit division??? | | | | | | |

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| **Teacher: Childress, Gilbert, Wall** | | | **Grade: 5** | | | **Date(s)**: Unit 2 Day 6 |
| **Unit Title: Unit 2: Operations with Whole Numbers and Decimals** | | | | **Corresponding Unit Task: Task 2** | | |
| **Essential Question(s): How do I use multiplication strategies to solve problems with large quantities? How can I use division procedures to help me to solve problems with large quantities? Why is it important to determine the unit rate when purchasing items?** | | | | | | |
| **Materials/Resources** | | | | **Essential Vocabulary** | | |
| **Teacher: teacher edition text book** | | **Student: division puzzles, math journals, text book, pencil** | | | **Quotient, dividend, divisor, multiplication, product, equation, estimate, compatible** | |
| **Learning Experience** | | | | | | |
| **8 Mathematical Practices:**  1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | **Common Core State Standards:**  **5.NBT.6 Number and Operations in Base Ten**  **Find** whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. **Illustrate** and **explain** the calculation by using equations, rectangular arrays, and/or area models. | | | | | |
| **I Can Statement(s):**   |  | | --- | | * I can use place value as a strategy when finding a quotient. * I can use the properties of operations as a strategy when finding a quotient. * I can use the relationship between multiplication and division when finding a quotient. | | * I can determine whole number quotients with up to four-digit dividends and one-digit divisors. * I can determine whole number quotients with up to four-digit dividends and two-digit divisors. * I can show division with equations. | | | | | | |
| **Activating Strategy/Hook:** Students will be given division puzzles. (see attached) They will work with a partner to put the pieces together to complete the division problem. | | | | | |
| **Teacher Directed:** Teacher will review the steps of division using the preferred mnemonic from yesterday’s lesson using a one digit by three digit problem. Teacher will introduce the strategy of estimating quotients with two digit divisors. Teacher will model how to use compatible numbers to estimate 159÷75. (160 and 80) Find compatible numbers for 159 and 75. (Think: 16 can be divided evenly by 8) 160 and 80 are close to 159 and 75. So, 160 and 80 are compatible number. Therefore, 160÷80 =2. Teacher will check for reasonableness: 2 x 80=160. | | | | | |
| **Guided Practice:** Teacher will complete problems 1 -6 on page 124 with students, modeling using compatible numbers to estimate quotients. | | | | | |
| **Independent Practice:** Students will complete problems 9-17 (odd numbers only) on page 124. | | | | | |
| **Closing/Summarizing Strategy:** Teacher will assign each partner group a division problem. Students will think aloud to their partner explaining how to use compatible numbers to estimate quotients. | | | | | |
| **Differentiation Strategies** | | | | | | |
| **Extension** | | | **Intervention** | | | **Language Development** |
| Students will create their own 2 digit problems. They will exchange with a partner to solve. | | | Review how to estimate whole numbers.  Continue practicing how to use compatible numbers to estimate quotients | | | Orally identify parts of the problem. (dividend, quotient, divisor, remainder) |
| **Assessment(s): Students will complete problems 19-25 on page 124** | | | | | | |
| **Teacher Reflection:** (Next steps?)  Did students understand how to use this method to solve division problems? | | | | | | |

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| **Teacher: Childress, Gilbert, Wall** | | | **Grade: 5** | | | **Date(s)**: Unit 2 Day 7 |
| **Unit Title: Unit 2: Operations with Whole Numbers and Decimals** | | | | **Corresponding Unit Task: Task 2** | | |
| **Essential Question(s): How do I use multiplication strategies to solve problems with large quantities? How can I use division procedures to help me to solve problems with large quantities? Why is it important to determine the unit rate when purchasing items?** | | | | | | |
| **Materials/Resources** | | | | **Essential Vocabulary** | | |
| **Teacher:** textbook, united streaming video, | | **Student:** Journal, textbook, pencil | | | **Quotient, dividend, divisor, multiplication, product, equation, estimate** | |
| **Learning Experience** | | | | | | |
| **8 Mathematical Practices:**  1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | **Common Core State Standards:**  **5.NBT.6 Number and Operations in Base Ten**  **Find** whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. **Illustrate** and **explain** the calculation by using equations, rectangular arrays, and/or area models. | | | | | |
| **I Can Statement(s):**   |  | | --- | | * I can use place value as a strategy when finding a quotient. * I can use the properties of operations as a strategy when finding a quotient. * I can use the relationship between multiplication and division when finding a quotient. | | * I can determine whole number quotients with up to four-digit dividends and one-digit divisors. * I can determine whole number quotients with up to four-digit dividends and two-digit divisors. | | * I can show division with equations. | |  | | | | | | |
| **Activating Strategy/Hook:** Give each table group a number (such as 212, 305, 428.) Have students round to the nearest 10, then 100. | | | | | |
| **Teacher Directed:** Review strategy for compatible numbers from yesterday. Teacher will use example from page 130 of Envision text—330 divided by 42 to show and lead students through the concept. Teacher will explain that there will be another strategy for dividing numbers—using estimation. Show United Streaming video “lesson 8 long division,” (approximately 3 minutes) | | | | | |
| **Guided Practice:** Teacher will guide students through 1-2 on page 131. In table groups, students will discuss 3-4 and appoint speaker to share for their group with the class. | | | | | |
| **Independent Practice:** Page 131, 5-8 | | | | | |
| **Closing/Summarizing Strategy:** Students will reflect in a math journal entry on the two strategies for long division and will decide which one they prefer and why. | | | | | |
| **Differentiation Strategies** | | | | | | |
| **Extension** | | | **Intervention** | | | **Language Development** |
| * 2-digit by 4-digit division problems, * Students create division puzzles | | | * Explain this process with 2-digit by 1-digit division * calculator | | | * orally identify parts of the problem(dividend, quotient, divisor, remainder, etc.) |
| **Assessment(s):**  Page 131, 9-12 | | | | | | |
| **Teacher Reflection:** (Next steps?)  Change anything? What worked well? What didn’t work? | | | | | | |